

17th Annual Sea Grant  
Lecture

## NASA But Not NOAA? Funding for Ocean Research in the 1990s

Lecturer  
Sen. Lowell Weicker

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For the past 16 years, the MIT Sea Grant lecture has been a forum for discussion of some of the most pressing topics in marine science. Recent topics, ranging from developments in underwater vehicles to the health effects of fish oils, have dealt with the latest in scientific developments, issues and concerns. This year the Sea Grant tradition was continued as a particularly pressing topic was addressed—rising public expectations concerning environmental protection and ocean research, but a drought in public funding for research in either field.

This year's lecturer was former Sen. Lowell Weicker. In his three terms as a senator from Connecticut, Sen. Weicker was the leading advocate of legislative efforts to support and expand ocean and coastal research programs, which included his co-sponsorship of legislation to strengthen the National Sea Grant College Program. As a member of the Senate Appropriations Committee, he shielded programs like Sea Grant and Coastal Zone Management from crippling cuts while leading the Congressional fight to preserve the National Oceanic and Atmospheric Administration's ocean research programs. Among other efforts on the

ocean's behalf, he introduced legislation to establish NOAA as an independent agency, to establish a National Marine Policy Development Commission and to restrict ocean dumping.

In recognition of this service to ocean research and protection, Sen. Weicker has been honored by the Marine Technology Society, by NOAA, by the National Association of State Universities and Land Grant Colleges, by the American Oceanic Organization and by the U.S. Friends of United Nations Environment Program.

Sen. Weicker's career was also characterized by energetic support of biomedical research, earning him the prestigious Lasker Award in 1988. He is currently president and chief executive officer of Research!America, a non-profit organization devoted to public education concerning medical research.

The following is an abridged version of Sen. Weicker's speech, "NASA But Not NOAA?," the 17th Annual Sea Grant Lecture at the Massachusetts Institute of Technology on Oct. 30, 1989.

It is a wonderful experience for me to be talking to you here today, and not in my role as a politician. I received my promotion out of politics about a year ago and I'm glad for it. There is a life after the U.S. Senate, and I suppose what it is depends on what your priorities in life are. For me, those priorities have never really changed, whether in civil rights; in medicine, in health; or in the oceans. And I am not so sure, in a day and age where people don't want controversy and don't want to spend any money, that I'm not better off on the outside right now doing everything I can to try to change this country's priorities.

To begin, I want to say one thing that bothers me and want to emphasize this point to each of you. I'd like to address the attitude that makes people say, "Well what can I do? What can I do in terms of medical research or raising its priority? What can I do on behalf of the oceans and marine research? You know, I'm only one person."

Well, I don't accept that reasoning as an excuse for inactivity. And I'll give you an example of why. When I first arrived in the Senate my closest, dearest friend there was Jacob Javits of New York. He was a very powerful man while a senator, with an enormous intellect, great vision about future problems and the opportunities to resolve them.

Then, in a twinkling of an eye, he was stripped of his title—he was defeated. And hard upon that, he was close to death.

I'd say those two events would normally make anybody sort of crawl back in their hole. But not Jack Javits. That man was in a wheelchair, with a respirator and whatever other attachments are appropriate for ALS (amyotrophic lateral sclerosis), going up and down the halls of the U.S. Senate and the House of Representatives and the Executive Branch, pleading for more money for research. Never was his voice and his conviction more powerful and never was it more adhered to and listened to.

I'm not trying to give you some story out of history. I'm talking about somebody I served with. So when I hear somebody saying, "What can I do?" I think of what Jack Javits did, without the title of U.S. senator and on the verge of death. So you don't need a title, and you don't need a position. What you need is a conviction. And if you believe, believe me you can turn the world around.

I think some turning around of the priorities of our nation is very desperately needed. It's going to require action from each of you, the people committed to the business of the marine sciences and the importance of what needs to be done about this greatest of resources on the face of the Earth.

Let me start with the background of my interest in the oceans, which began with a trip to the *Hydrolab*, a four-man submerged marine research station run by the H.A. Perry Foundation off Freeport, Grand Bahamas. At the time, I was looking for something challenging and rewarding to get into, having just spent two or three years involved in the depressing and negative exercise of Watergate.

At first I viewed the lab by hovering at the surface with a group of other legislators. But that wasn't enough—I wanted to do more than watch from a distance. So I exercised some senatorial privilege, took scuba lessons that same day and visited the lab firsthand the next morning.

From that experience came a great love of the oceans and what they can be.

Shortly after that I took over the chairmanship of the Subcommittee on Commerce, Justice, State, the Judiciary and Related Agencies, which handles NOAA. We took over the *Hydrolab*, made it a part of NOAA, and had it run by the West Indies Laboratory of Fairleigh Dickinson University. And slowly, but surely, we are trying to develop a visible program in ocean research that will capture the public's imagination.

What I'm trying to say is that once I actually saw the marine environment with my own eyes, and when I associated with marine science researchers, I became enthralled with the challenge and opportunity of marine science—not as a scientist, not as a graduate of marine research as such, but as your typical layman.

Now if that could happen to a Lowell Weicker, it could happen to a lot of other people.

What I want to do now is to realistically recount where we sit in this whole matter of NOAA, of Sea Grant, of marine research, of the constituency for this world. And the issue hinges on one word—"reality."

Now, the reality is that in the Reagan budget years, had it not been for a few senators and congressmen, there would be no Sea Grant, and no NOAA, and the other of my interests, no NIH. I don't care whether you're for Reagan or against him. I don't care whether you're conservative, or whether you're a liberal. Some things don't lie in this world. And one of those things is a budget.

Now, that's it. You can't do anything else with the figures that were presented to the Congress. That is a fact. And if you want to know how fast NOAA's standing turned around, because of lack of public support—

within 48 hours of my being defeated for the U.S. Senate, the underwater research program funding at NOAA was scheduled for reprogramming, with a loss of three quarters of its budget.

Slowly, but surely, I think that we've all been through a repetitious process. Almost a slow starvation. Rather than reach for the greater vision, we've gotten to a point where we are glad to accept little scraps and no cuts and the fact that we're still alive.

Now, first of all I would suggest to you that the time has come to make the oceans—a knowledge of the oceans and the utilization of the oceans—a national priority, so funding doesn't have to rest on the shoulders of one or two men or women. But just as I gained my understanding from scratch, the American people must gain an understanding about this resource.

How can all this erosion of funding happen? How can it happen to NOAA, when indeed the exact opposite exists insofar as NASA is concerned? And I'm not here to shoot at NASA. When I came in to the House of Representatives in 1968, my first committee was the space committee, which helped draft Congressional support for NASA. I'm not here to say that money should come from NASA and go to NOAA. But I think that the NASA example is something that should be looked at.

They did a great job of communication at NASA. Indeed, when the *Challenger* disaster struck a short while back, the people who stood by the agency and its mission at its worst times were the people who were just little children at the time of the first space shots.

That's the necessity of developing a constituency, that's the necessity of a good communications effort.

Where is the NOAA constituency?

You tell me.

Where is the communicating?

You can eliminate NOAA, you can eliminate Sea Grant, and there isn't a person—except a few academic types, and a few shoreline states and their representatives—who would raise a finger.

The time has come to understand that we've got a job to do, those of us who believe in Sea Grant and its mission. A job just as complete in terms of communication, in terms of selling, as that which was done for NASA has to be done for Sea Grant. It's a job that has to be just as complete as if you want to sell a can of beer or tube of toothpaste or a hamburger in this country.

What we have to do is to have America understand what the oceans are about, the promise of those oceans, and to understand that when we do make an impact on them that impact has to last for millions of years—we can't just measure it in terms of decades.

Now, don't feel lonely in this task. I mentioned the other agency that I put under my protective wing, the National Institutes of Health. The same process that was going on at NOAA was going on at NIH.

The reason I know this is that at the outset of the '80s, at the outset of the Reagan administration, I was chairman of Commerce, Justice, State, which handles NOAA, and then moved across to the Subcommittee on Labor, Health and Human Services, Education and Related Agencies, which handles the National Institutes of Health and all the education funding. And the same processes were going on—just cut, cut, cut, never mind substance, just achieve dollar levels.

When I asked my friends, the men at NIH, "Is this your budget, or is this an OMB (Office of Management and Budget) budget?" The answer came back "OMB." And then I would ask the OMB man to stand up and I said, "Well, is there anybody in the OMB that is a scientist, or is there an academic over there, or somebody, in other words, that has some knowledge as to the cuts to be made?" The reply? "No, nobody."

Same process going on. There is, again, no constituency. And mind you, this is the National Institutes of Health, with a great track record, discovery upon discovery coming out. Even more so than anything generated by NOAA. But still no constituency.

Now, that's the job that we've got to do. I didn't come here to give you a scientific lecture, I came here quite frankly to enlist some help. Whatever my job is over at Research!America right now, to enlist help on behalf of the National Institutes of Health and of medical research, you've got the same job so far as NOAA and Sea Grant are concerned. Because otherwise there isn't going to be any NOAA and there isn't going to be any Sea Grant, and this will probably be one of the last lectures given. And that is not a joke, it's not meant to go ahead and frighten, it's just a matter of the budget.

And everybody is sitting here is so grateful that NOAA and Sea Grant are being mentioned in future budgets, that worse cuts didn't happen, that it would appear that there may even be a small increase.

You have to be kidding.

I might add the same attitude holds with my medical friends over at NIH: so delighted that the National Institutes of Health is still there, that there may be a small increase, that they haven't been cut.

You tell me what's more important—the business of life or the business of death in this country? I'm not one of those who go running around saying the United States can strip down to its BVDs defense-wise and wave an olive branch in the air. I understand we need a defense. But do I think something is out of whack when you're talking about \$300 billion for defense? And when you're talking about \$1 billion some odd million for NOAA or \$7 billion for the National Institutes of Health?

Yes, I think that's a little screwy. And I think it's time we said so, and I think it's time we acted on it. You say, well, how can you communicate? Is it possible, I mean does grassroots mean anything? Can it be reached?

Can it be reached? I'll give you a good example of how it can be reached. Say you've got a social security vote on the floor of the U.S. Senate. Believe me, every senator in that room, and the same would hold true over at the House, is looking over his shoulder. Why? Somebody has communicated to the grassroots the importance of Social Security and Cost of Living Adjustments and Social Security increases or decreases.

Now, if within minutes of taking a Social Security vote, we have a vote on the National Institutes on the Aging, one of the institutes over at the National Institutes of Health, I can assure you that same congressman or senator who voted for Social Security can go ahead and vote to cut NIA without even a second thought. Just like that.

Now, I think it's great to go ahead and have a Social Security check, but it doesn't do you much good if you're not alive or in good enough health to spend it, does it?

Nobody cares, there is no accountability whatsoever.

So what's the difference between NIA, then, and Social Security? Well obviously somebody has communicated.

So, yes, I think we can communicate NOAA. And I think we can communicate the importance of ocean research in this nation to the grassroots.

I know that my audience here today likes to feel it lives in a very special world, just as do the doctors and scientists over at NIH. Well I've got to assure you that there is no more idealistic person than your speaker.

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And I'm sure that I felt all good things should rain down on my head for what I did in the Senate of the United States, and you feel the same about what you've contributed to marine research. But we also live within a political system. And you're not exempt from the rules of the game, any more than I am. And very frankly if we want Sea Grant to survive and grow—and grow to me is more important—if we want NOAA to really fulfill its role, its opportunities, then you've got to get your jerseys dirty. You've got to get out there on that political field.

Ben Franklin said it best. He said in this nation the people rule.

And they do.

What do we want? What we want as a nation is very much going to be shaped by the voices in this room. When it comes to Sea Grant. When it comes to NOAA. When it comes to funds allocated for science.

We had a great opportunity two summers ago when all that medical waste and trash washed up on the beaches in Massachusetts, Connecticut, New Jersey and New York. It seemed like everybody was irate. And then somehow just enough was done so none of that *showed* during the last summer's swimming season. Well, you know just as well as I do that what showed two years ago, or what didn't show last year, is totally unimportant.

It's what's beneath the surface that's important. That's where the damage is taking place. But the public just left once the beach season was over. Gone home. That was the end of our interest in the oceans.

Now you better start telling that public, and I better start telling that public, that in terms of devastation and damages, what they saw floating on the surface was just peanuts. What's important is that we understand those waters and what's on that ocean floor. And that we understand how fragile that environment is. And protecting that environment requires money to go ahead and make sure that it stays all right.

From this great resource eventually will come our food, our energy and a lot of our medicine, too. And what kind of a condition is it going to be in?

I said here earlier that budget doesn't lie. Now, let's just take the very briefest look, and let's make a comparison between NOAA and NASA. The total NOAA budget for FY 1990, \$1.215 billion. And the total NASA budget, \$12.377 billion.

I don't want to set science against science, that's not the purpose, but is there anybody who would deny that the potential of the mission is as great for NOAA as it is for NASA?

There is no denying that.



I am not seeking to get funds from NASA for NOAA. Wouldn't take them if they were offered. But there are other parts of that budget, believe me, that have to be re-evaluated. And we're also going to get down to the elemental fact of life around here, and if nobody else will say it I will: If anything is worthwhile it ought to be paid for.

Which means you go ahead and raise the money for it.

You want to know how Sea Grant is doing, while we're all sitting here and celebrating Sea Grant. Forty-one million dollars. Forty-one million dollars! The underwater research program, \$14 million.

That's for the United States of America. Just the space shuttle project, \$1.7 billion.

So, I think the figures tell you the story. There is not much that can be done to be the premiere nation of the world when it comes to knowledge of the oceans with \$41 million or with \$14 million dollars. It ain't gonna happen.

Do I think it's worth paying for it? Yes, I do. And if everybody in this room is satisfied with no cuts or with current budgets, or with freezes, if that's what gives you your jollies, then you're not long for this world. And indeed if it were not for a handful of senators or congressmen we wouldn't even be meeting now.

Now, I don't think there is anything to be proud of in my tenure in Commerce, Justice, State, or even after I left it, in terms of the NOAA budget. I'm not satisfied with the fact that we fought to a draw and neither should you be.

And don't forget when we talk current services, when we talk freeze, that we're talking cuts.

I can tell you, here we sit in the greatest scientific institution of its kind. And insofar as the mechanics of allocation of resources to marine research, on the part of United States of America, we literally—and I mean literally—are in a bubble gum and bailing wire situation.

All that great expertise and technology which is brought to bear in medicine and space, and everywhere else, is totally lacking except for the dedication of individuals. I'm not demeaning the effort of any individual here, but I want that same commitment on the part of my government. So should you. You shouldn't be satisfied being nibbled to death.

Now I've talked about the communications effort; we'll leave that to one side. What are some of the other things that should be done? Do I think that NOAA should be an independent agency? Yes, I surely do. It's buried in the Department of Commerce, even though it's the largest part of the Department of Commerce.

In terms of personnel, it's the largest part of Commerce. In terms of priority, I can assure you it is one of the lowest priorities in any administration. I believe it should be independent, independent of Commerce.

I have to say to you also that I believe that NOAA and EPA should be merged. I think that that would be a very powerful agency by virtue of the commitment, seeming commitment anyway, of the people of this nation to the environment. I think the combination of those two forces could be enormously powerful in capturing the support of the public.

So an independent agency but then a merged agency—NOAA and EPA.

For a long while there was debate about whether the Coast Guard should, in effect, be the navy for NOAA. The answer is no. It should have its own fleet.

There should be funding levels that encourage the academic world to commit greater resources, and the private sector as well.

Now, there is no way of achieving this cheaply, I alluded to that earlier. And if you want to take the no-new-taxes and no-new-revenues pledge, fine. But, then I've got to warn you, you're going to be one of the first to suffer.

Do I think the cleanup of our waters in Connecticut and Massachusetts is worth new money? Yes, I do, and new money is the only thing that's going to clean it up. Do I think the scientific efforts to gain knowledge of those waters is important, and deserves new revenues? Yes, I do. Would I be willing to tax for it? Yes, I would.

Ladies and gentlemen, the playing board today is the same as it was a decade ago except that the playing pieces are bigger. You can't run a 1990 America on a 1970 budget. It doesn't work. And we need consistency, I might add, in terms of funding so that we encourage young people to get into the marine sciences. That's terribly important. God knows, they're even leaving even medical science in droves because of the inconsistency of government funding. Well, I think it's important that young America be drawn into this quest for knowledge and into this vision.

You know, even while we speak on the most pressing problems of this time—whether drugs or education—we won't say that are we for things being done, and we're also willing to pay for them. I don't understand that. And sooner or later, somebody is going to go ahead and pay the piper on this scam.

For instance, a bill was finally passed to aid the victims of the recent earthquake in California. But boy, it took a long time for any national leaders to spit out the fact that we're going to have to go ahead and raise some money to do that, and I'm not so sure that whatever bill passed is even funded. The war on drugs isn't funded. And yet, we have a bill on that. And educational opportunity sounds great, but it's not funded.

You say to me, "Well senator, it's great for you to say, you're no longer a senator." Listen, I said it while I was a senator, and I said it while I was up for re-election. You have to say it, at the same time you speak for that great love which brings us together here, you also have to say, yes we have to pay for it. Like anything else worthwhile. Otherwise the credibility of your message goes down the chute.

And that message is an important one. To illustrate my point, I'll share an experience with you. I happened to be visiting the Caribbean Marine Research Laboratory on Lee Stalking Island in the Bahamas. And for the first time I had the opportunity to see the collection of stromatolites which exist off that island. It is quite a feeling, no matter how much you think you know about the waters, to sit there and touch something that's millions and

millions and millions of years old. It makes you realize really how short a time we all have on the face of this Earth to do something worthwhile; we're a peanut in that scale of time.

And I suppose that's what I am pleading for, not the fact that you be better scientists, because you are good scientists. Or that you love the oceans more, because you do love them. Or that Sea Grant is worthwhile, because we know that it is. Or that NOAA is a proper agency. That's all redundant, when I appear before a group like this. It's the fact that getting out there and fighting for the oceans is not being done. Not that you can't do whatever you want to in scientific terms, you can. But to gain the support of a nation—that's very sadly lacking.

I'll conclude with the historical tale of what one person can do, because it was one of the things that I've always been impressed with. From time to time I was lonely out there on the floor of that Senate—whether in a civil rights cause, or human rights cause, or a condition of war or peace—there were very lonely times, and I think I understand what they're all about, but I never have lost my faith in what a person can do. And that ultimately, I suppose, is what this lecture was to be all about—that each of us must do what we can.

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I mentioned that after I gave up my chairmanship of Commerce, Justice, State, I moved over to Health and Human Services. One of the first things I did was go out to Hawaii, to review health issues in the Pacific Basin. During that visit I became the first non-Hawaiian senator to visit the Hansen Disease center, or Leper colony, on Kalaupapa on the Island of Molokai.

There are only about 180 persons still there. Maybe even less as I talk to you. It has become an historical site; most lepers today are cared for as outpatients. No cure has been found. Better treatment—yes, but no cure. But remember, over the course of history the leper was the most despised of individuals.

I visited that island and its lonely peninsula and looked over the bay where these people used to be thrown over in crates. The lucky ones got eaten by the sharks before they reached the shore. Those who reached the shore entered a total living hell. Then one man appeared on the scene. Father Damien. And he didn't have any wonder drugs, he didn't even have the backing of his own faith—the world turned its back on him. Yet, he changed the attitudes of a world. For once, these people had hope, they had a roof over their heads, they had a meal, they understood cleanliness,

they could worship in their own faith, they once again became human beings—from a totally dehumanizing experience—and all because of one man and one man's dedication.

I've seen what you've seen, insofar as the oceans of this world are concerned. I know the great beauty and the great promise that lies there, as indeed that each of you do. There is nothing that I can commit to you that you don't know better than I. But I deeply believe that the ocean is a great priority for this nation. It's one of the great legacies and great opportunities to create a legacy for future generations.

So much of our political and governmental lifetime today is just drying up the well of what other people gave to us. How great it would be to give something back.

So do your work in your labs, do it on the ocean floor, and do it in your studies. But once again, commit a little part of your life to having the promise of the oceans understood by all of our people, because sooner or later, it will become a must in their lives. Not just a place to go water skiing, or to lie on the beach, but a place to feed mankind. To warm mankind, to cure mankind. That's the future of the oceans. You know it and I know it. And whether we get there or not very much depends on you.